

ABSTRACT

A pattern forming method of the present invention includes the steps of forming, on a substrate before droplets are ejected onto the substrate, a water repelling area, in which a contact angle between the droplet and the target surface is a first contact angle, and a water attracting line, which is adjacent to the water repelling area and in which a second contact angle is smaller than the first contact angle and which is to be the pattern to be formed; and landing droplets onto the target surface such that part of the droplet landed is in a water repelling area and part of the droplet landed is in a water attracting line, the equation (1) is satisfied,

$$D \leq L \times \{1 + 2(\cos\theta_2 - \cos\theta_1)\} \dots (1)$$

where D is a droplet diameter, L is a pattern width, θ_1 is a first contact angle, and θ_2 is a second contact angle. By decreasing the number of discharged droplets, it is possible to prevent increase of a tact time and decrease of an inkjet operating life.